

again supplied with leaves. To do this it will be necessary to have a few extra hurdles, but they will greatly facilitate your work. Before the worms are hatched, it would be well to burn some clean straw or small willows and have a quantity of these ashes with which to dust the hurdles after removing all refuse; this will act as a disinfectant, and is a custom always followed by people of Oriental countries, where silk culture is so successfully carried on.

Do not undertake the raising of more worms than you have food or room for. The worms from an ounce of eggs should have a space of 9 feet in the first age and 7 pounds of food. In the second age, 50 feet and 20 pounds of food; in the third age, 100 feet and 65 pounds of food; in the fourth age, 200 feet and 200 pounds of food; and in the fifth age 430 feet and 1,250 pounds of food. One ounce of eggs should produce 160 pounds of cocoons.

Avoid sudden changes in temperature, draughts. Thunder and lightning are very injurious, and it is necessary in case of a storm to cover the windows, to prevent their seeing the lightning. It is considered that from 70 to 80 degrees of temperature is the most genial to the worms.

—Kate B. Carter—D.U.P. Files

IMPORTANT PIONEER ARTISANS

Quarrymen and Limeburners had thriving business in the 1870s. Located near the northern limits of Salt Lake City and County, a little distance south and east of the Hot Springs was MacDuff Brothers' limestone quarry and lime kilns. The firm was founded about 1865 by John Robertson MacDuff, his son Malcolm, and son-in-law William Varley. It was said to be the second such business founded in the Territory of Utah. Malcolm and William had arrived from England in 1861; John in 1864. In 1866 Thomas Hancock, another son-in-law, arrived; and in 1868 Charles Burns, John's stepson arrived and both became partners.

At the Hot Springs site, quarry and kilns were established; and the firm also owned property on Commercial Street (now Richards Street) in downtown Salt Lake City where office and depot were maintained and from where lime was sold and delivered throughout Salt Lake City. The lime kilns were situated in a row, downhill from the large quarry where the limestone was periodically blasted loose, broken into smaller rocks, then loaded onto heavy wooden carts mounted on two short logs instead of wheels, and pulled by horses from the quarry to the kilns.

At the kilns, the lime was burned in this manner: At the bottom a thick layer of brush was placed, then a layer of coke, then a layer of limestone, then alternating layers of coke and limestone until filled to the top. Then the drafts were regulated, the brush was set afire and it took up to two weeks to burn. A

very good grade of white lime was thus obtained for which there was good demand. The firm furnished employment to a large number of men, several of whom had gained experience in the mines and heavy industry of England's midlands. Some of the lime used in building the Salt Lake Temple was furnished by MacDuff Brothers.

The following advertisements appeared in the *Deseret News* in August, 1872:

LIME! LIME!

Mammoth Lime Kilns

South of Hot Springs

Can be had Daily from 5 a.m. to 8 p.m.

At kilns or Delivered to any part of the City

On Shortest Notice

EXTRA WHITE LIME! !

Only 50 cents per bushell ! !

Always on hand at our Depot

For Finishing! !

Pleasure Boats for Hire on Hot Spring Lake.

Office and Depot: No. 13 Commercial St.

and Rear of Grand Restaurant.

MacDuff Bros., Proprietors.

The partnership continued into the 1880s. Some time after the death of Malcolm MacDuff in September 1881, the assets were divided and the partnership dissolved. The other partners, and later some of their descendants, continued operating quarries and kilns.

—Max E. Briggs

On the 11th of February 1857, the ground was dedicated for the Bountiful Chapel by Lorenzo Snow and the building proceeded immediately. The first load of rock was hauled for the foundation by Marriner W. Merrill. Rock at that time was very plentiful. The lime that the mortar was made from was burned in the two kilns in the hollow of Barton Creek. The kilns were different from today. The rocks were placed in the kilns and an arch built so as to admit a fire. It was kept hot with wood and it had to be kept going or it would spoil the whole thing.

—Israel Call.

Fredrick Judd was born in Covington England. When he was nine years old his father died. Frederick then had to help support the family so he apprenticed in making brick and burning lime. He left England in the spring of 1868, to come to Utah. He remained in Salt Lake City one month and then he was sent to St. George, where he assisted the temple work by burning the lime. Also he furnished lime for the courthouse and other buildings.

He came to Panguitch in 1892. Here he made a brick kiln. He was happy to find out that the black dirt burned to red brick. The kiln was built in the southeast corner of town. Fred Judd leveled the ground and then he made the adobes in moulds. The helpers carried these moulds of adobes to the level ground and placed them in rows to dry. Each morning the adobes were turned over. When they were ready Fred placed them in the kiln. The kiln looked like a real big mansion when completed. Windows were in the top and bottom. When they were ready to burn, wood was placed in these windows and set on fire. The fire burned for five days and nights. The people were glad to help and when they saw this big fire they cleared off the ground and danced all night, lunch was served at midnight. The cooperation was wonderful. While the brick was being made, men hauled five hundred loads of wood and stacked it close by for the burning. Everyone was trying to complete this project and was happy when it was done.

The lime kiln was built the same way with everyone helping. He built a tepee of black lava rock. The lime rock was put in from the hole in the top of the tepee, a door was fixed below and when they were ready to burn the lime a fire was started and this burned for five days and nights. When they were ready to build a house, this lime rock was placed in a wooden vat, which had a lattice hole in one end, where the slack from the lime ran out into a vat. When they were ready to slack the lime they poured water on these rocks and it would commence to boil and was very dangerous. Everyone was cautioned to be careful. They would take one shovel of lime and five shovels of sand to mix the mortar that they used to lay up the brick. It was real professional to lay the brick even and symmetrical according to measurements.

—Mary Sargents.

Samuel Brough was another brick maker by trade and also worked in coal mines in England before coming to America. After his arrival in Utah, he and his brother Thomas Brough settled at Porterville and started in the brick business. In the year 1870, he walked through the hills from Porterville to Randolph, Utah, having heard that land was available in and around that area for homesteading. While in Randolph he built a log house, and in the fall of 1870 went back to Porterville and brought his family to Randolph in 1871. He worked during that summer clearing sagebrush and plowing the land, and in the winter months left his family in Randolph while he worked in the coal mines at Almy, Wyoming. He continued doing this until he had sufficient land under cultivation to support his family, then began making brick and did so in the following manner:

He built two pugmills and each one had a pit dug back of it, about 10 feet square and 3 feet in depth with dirt walls and a

board floor in the bottom. These pits would be filled with dirt which made the mud for making the bricks. The pugmills were made of 2 inch planks, a box about 4 feet square and 5 feet high with a plank floor. A log was placed in the center of the box with paddles fastened around the log. Then a large log about 25 or 30 feet in length was fastened to the top of the upright log, lying flat. A horse was hitched to the small end of this log and traveled around the pugmill and the mud pit, which turned the upright log and the paddles and mixed the mud. A hole was cut about 12 inches square at the bottom of one side of the pugmill, and as the horse went around the mixed mud would come out through this hole on a plank table that was at ground level. A hole was dug about waist deep at one end of this table and Samuel would stand in this hole. He would sand the table, then take both hands and pick up a piece of mud sufficient to make one brick, roll it on the sanded table, then throw it down hard into a mould which held three bricks. He would then take a cutter and run it along the top of the mould to smooth off the surplus mud. The three bricks were then carried out of the yard, tipped out of the mould and left to dry. To run this operation it took Samuel to mound the brick, one man to shovel mud from the mud pit into the top of the pugmill, two boys to carry the brick, empty the brick from the mould, return and wet and sand the mould, take the empty mould back to the table and pick up the filled mould again. This was repeated for about 8 or 9 hours, which took a lot of walking. He would make about 4,000 brick in one day. As soon as the mud pit was empty they would move to the other pugmill and work at it while the first pit was refilled and soaked with water. The mud pits were filled with a team and a scraper. This man also shoveled the mud into the pugmill in his spare time. The pits would hold enough dirt to make between four or five thousand brick. The boys were paid one dollar per day and the man who shoveled mud, one dollar and fifty cents.

As soon as the bricks were dry enough to handle they were gathered off the yard and stacked in rows about five feet high and left until about one hundred or one hundred fifty thousand had been made. They would then be hauled and stacked in a kiln, placed on their edge in tiers four bricks high then one checker tier would be laid and the holes filled with slack coal then another four course layer of bricks etc. until it reached a height of twelve or fourteen feet. Arches would then be built at the bottom of the kiln and a fire would be made in these arches with wood and coal to get this slack coal on fire which was among the brick. The outside of the kiln was plastered with mud and about three or four inches of dirt was spread over the top of the kiln. After the fire got a good start, firing in the arches would be stopped. The mud plaster on the walls was for the purpose of making it airtight on the sides, and the dirt on the top was for

use in regulating the fire. Samuel would remove the dirt in spots where the fire was not burning enough, and keep it covered with dirt where the fire was burning too fast. The dirt was removed mostly at spots along the outside edges of the kiln. If it burned too fast in any one spot, it would melt the bricks and they were worthless. It took about 10 days for the kiln to burn out and during this time Samuel had to be almost constantly on the job night and day to regulate the fire. After the fire was out and the bricks cooled off, they were ready for market.

Samuel had two lime kilns in old Laketown Canyon. He made lime by digging a hole in the side of a hill about fifteen feet deep and about twelve or fourteen feet in diameter. The walls of this round hole were lined with fire brick. The hole was smaller at the bottom than it was at the top, and in the bottom steel bars were laid across the hole up about two feet from the bottom to make a grate. Lime rock was quarried from the top of this hill and hauled down the side of the hill to the top of the kiln and unloaded in the kiln and broken up into pieces not larger than about six inches. A layer of rock about one foot thick, then a layer of slack coal about three inches thick was placed and this continued until the kiln was full. Fire was made at the bottom and it would burn for about a week or ten days before the fire was out. The processed lime was drawn from the bottom of the kiln. This product was sold at Randolph and Woodruff, Utah, and Evanston, Wyoming. It was also used for making lime plaster by adding water and making a thick putty to which sand was added.

—Delora Hatch

Adobe Making. At the northeast part of Elsinore near the Elsinore Canal, N. P. Anderson made hundreds of adobes. To make the adobes they began by digging clay on a high place and mixing it with water carried from a nearby stream. The mixture was tramped with bare feet until of proper consistency, then shoveled onto a table where it was put into a box-like mold using the bare hands. The finished product was then dumped onto the ground where it was baked by the hot summer sun. The second day the adobes were turned on edge. Two or three days later they were carefully placed in piles of 100 each, ready for use. Later, mud mixers drawn by ox or horse going round and round made the work easier. By working from early morning until late in the day, one man made one thousand to twelve hundred adobes a day. As late as the 1900s, the regular size adobes sold for \$2.50 per thousand. The larger size sold for \$3.00 per thousand. Two men could make twenty-five hundred to three thousand adobes a day.

Niels C. Hanson, a pioneer of 1866, made a living by manufacturing bricks and lime in Ephraim, Utah, and later in Elsinore. The brick kilns in Elsinore were located one block east of the

present Jr. High School building. Mr. Hanson's sons chopped the wood to the proper length and fired the furnace at night. Here boys of the town often gathered for sports such as they could entertain themselves with around a bonfire or in the moonlight.

—Ada N. Anderson.

Early brick making in Kanab, Utah was accomplished by the Ford Brothers who had learned the trade from their father, Edwin Ford. He and his family settled in Kanab in 1873. Most of the early homes, schools and stores were built of the brick made by these men.

Bricks were made by hard labor. The pugmill was a home-made one, built of plank two inches thick, twelve inches wide and six feet long fashioned into a square box six feet high. The shaft in the center of the box was a tree trunk that had a fork or Y to make a bearing for the sweep which was another strong pole, usually made of oak. At the bottom of the shaft was bolted cross pieces in the shape of a star or dasher, similar in design to our modern blenders. A horse was hitched to the long sweep to mix the mud. Built at the front of the mill was an apron or mud board, and directly in front of that a hole was dug waist deep to a man. Men were employed to fill the mill with clay and sufficient water to make a stiff mud. Using the horse power, the mud was mixed to the right consistency at which time a board gate was opened and the mud would pour out onto the mud board where Edwin Ford and his sons would plop it into the home-made molds that had been washed and sanded so the adobes would slip out. They would take both hands full of mud and slam it as hard as possible into each compartment, a double handful of mud for each adobe. Edwin was so skilled at this that as he threw the mud it filled in all the corners and came out square. After the mold was filled a metal bar was used to scrape or smooth off the mold.

The yard where the adobes were put out to dry in the sun was made smooth by a handmade float and they remained in the sun for about two days, then were edged up and allowed to stay until dry. When dry they were piled in ricks (a special way of stacking) and put into a kiln for burning which was the process of turning the adobes into brick.

The kiln was built so that there was a space between each adobe and an area the entire length of the kiln where a fire made of cedar and pine logs was built. The outside of the kiln was plastered on all sides and top to keep in the heat. After lighting, it was necessary to keep the fire going day and night for five or six days until the whole kiln was red hot. It would take ten days to cool down before it could be opened up and held as many as 10,000 brick at a time.

Burning and Preparing Plaster. About five miles from Kanab, Utah, in land just south of the Utah-Arizona border, a substance was discovered that was valuable as a material for making a hard plaster used when building homes. John M. Ford established a business preparing this plaster and did so using the following method: He made a large vat, about 4 feet by 2 feet of heavy sheet metal. This was put on a fire box that was built of brick and just wide enough to hold the vat. The clay material was placed in the vat and a wood fire built in the furnace beneath it. While it was heating, the substance was pushed back and forth with a large hoe. After five or six hours when there was no moisture left in it, it was scooped into a bin and left to cool. After cooling, it was sifted into another bin by shaking it back and forth on a sieve made by nailing screen wire onto a wooden frame. It was then sacked into bags which held approximately 70 lbs. each. This was a good business for several years and Mr. Ford worked at it until his health failed. In addition to preparing the plaster, he used it himself plastering many homes and buildings in the Kanab area.

—Agnes Ford Johnson

EARLY PEDDLERS

Joseph Derbidge, gardener and coachman to Captain Hooper, lived in Lehi on the corner of First West and Fourth North, where he also kept a store. This locality would not be complete without mention of the Chinaman, a truck gardener on the corner of Fourth North and Second West. Water and watercress were secured from the spring in the block between First and Second West and Third and Fourth North.

Almost daily, Thomas Quayle could be seen driving a large brown horse, hitched to a light spring wagon loaded with farm produce, to town. Besides vegetables, he specialized in cherries. Large black walnut trees, too, grew on his farm. These nuts were considered a rare treat. John Gabbot, Thomas Twiggs, Seth Rigby, and William Gibby were farmers who had light spring wagons to haul their produce, and heavier wagons with a team for heavier loads. Each farmer specialized in certain crops suitable to his soil. John Van Cott was called the Onion King, John Gabbott raised fine asparagus, Thomas Twiggs raised splendid cauliflower, cabbages and peas. Isaac Riches was the Wheat King.

A Chinaman, called Tom, had a vegetable garden which was located from Third East to State Street, and covered a large area of the land in the Liberty Ward. Alfred Best purchased a fifty-acre farm bordering Murphy's Lane on the south and extending from Ninth to Eleventh East. The Sprowl and Borg families had dairies. They lived on State Street and pastured their cows along the creek banks. They sent wagonloads of milk into the city to serve hotels, eating houses, and the city residents.

On the corner of State Street and Seventeenth South lived the Morris family, who made horseradish in large quantities. They sold it in town to stores and also to people who came to their house for it. Mrs. Morris also made yeast, and many women patronized her. They would take her a cup of sugar or a bucket of flour and get a large start of yeast in return. The colonists succeeded in catching sufficient fish to satisfy their needs. Later the supply exceeded the demand and the fish were sold in the surrounding settlements, often as far as Tooele. Thus arose Lehi's first commercial enterprise.

—History of Lehi.

THE PIONEER SHOEMAKER

Upon Jens Rasmussen's arrival in Logan, he obtained employment with Peter C. Sorensen, a brick manufacturer operating at 720 No. 2nd West in that city. He helped make the first brick that was sold to the Agricultural College in Logan and also those used in building the Tithing Office.

During the winter months when brick making was not practical, Jens would sell shoes he had made and mats he had woven, around Logan and in surrounding communities. The soles and heels of the shoes were carved from a block of wood, the wood being obtained from the canyons above Logan. Leather was used for the upper part of the shoe. This was purchased from a local tannery. This type of shoe was most advantageous when used in wet areas and places such as barns and stables as the foot could be easily slipped in and out of it and the soles were waterproof. Jens' daughter, Camilia, remembers that they would wear a pair of warm home-knit woolen stockings and shoes that their father had made for them before going out to play in the snow, or do outside chores.

The mats Jens made were woven from reeds that had been gathered in the low areas around the Bear River. These home-produced items made it possible for him to provide for his growing family during the winter months.

—Norma Winn

The pioneer shoe last is on a tall stand about two and one-half feet tall. It has a large and a small last, the shape of a foot that fits on it. This was a very important item for the pioneers. James Sheddon of Devon, Clackman, Scotland, a convert to the Mormon Church, brought a last with him across the plains in 1865. He was a shoemaker by trade in Scotland. He arrived in Utah on October 6, 1865.

—Zola Walker Gogarty

Hide Tanning and Shoe Making in Payson, Utah, was a very important business in pioneer days. All leather for harnesses and shoes was made locally since the distance to factories in the East was great and transportation difficult. One of the first tanneries in Payson was owned and operated by George Hancock and

DESERET AGRICULTURAL AND MANUFACTURING SOCIETY

As an added inducement to promote the arts of domestic industry and to encourage the production of articles from native elements in Utah, the Legislative Assembly in 1856 enacted a law which created the "Deseret Agricultural and Manufacturing Society." Annual exhibits of the best agricultural products and manufactured articles were held with the view of stimulating the people of Utah to industrial pursuits, and premiums were given for the best examples in each field. An appropriation of \$1,500 was made to start the project.

This organization was the forerunner of our present-day State Fair.

TEMPLE BLOCK PUBLIC WORKS

The pioneer leaders also made arrangements for temporary employment for the steady stream of immigrants coming into Utah during the colonial period. Shops, known as the Temple Block Public Works, were established primarily for the purpose of taking care of those immigrants who were of the European industrial classes. There was a shop for carpenters, one for blacksmiths, machinists, painters, and others. The immigrants were thus given temporary employment until they could be established in one of the Utah towns.

Daniel H. Wells was superintendent of the Temple Block Public Works from 1848 to 1864. Under his direction many pioneers received their first start in life in Utah. The Public Works did much to stimulate the development of industry in Utah.

EARLY UTAH ARTISANS

The supply of emigrants from the United States, England, Scandinavia, and other parts of the world contained artisans representative of every industry. There were skilled architects, masons, shoemakers, weavers, skimmers, clothiers, harness makers, cabinetmakers, journalists, printers, composers, jewelers, and even makers of musical instruments.

The people of Utah have never been so blessed with an array of trained laborers as in the first generation of pioneers who settled in the valleys of the mountains. These early settlers were drawn from the common people. They were trained and inured to work. These facts were important factors in Utah's becoming successfully colonized and the home of a multitude of industries during the colonial period.

DOMESTIC INDUSTRIES

Of necessity the first manufacturing in Utah was done in the homes. The pioneer women carried on every industry which was adapted to small scale production. Besides making clothing for themselves and families, they made rag carpets, quilts, pillows, dyes, candles, soap, and many other necessary articles. One of their big tasks was to put away for winter use the fruits and vegetables produced in the gardens and orchards. Each day the housewife also had the task of making the bread and supplying the family with food.

By 1852 the majority of the people of Utah were wearing homemade clothing. During the first two months of that year, Brigham Young's family alone manufactured over 500 yards of cloth. Hulda Duncan of Davis County, between August 5, 1854, and January 27, 1855, wove 194 yards of jeans, 508 of linsey and 64 of flannel, besides doing other work.

EARLY UTAH INDUSTRIES—FIRST SAWMILLS AND GRISTMILLS

Besides manufacturing articles in the homes, many industries were begun in pioneer days. Some of them, adapted to Utah conditions, flourished. Others later died out.

Machinery for sawmills and gristmills was brought across the plains by the first pioneer groups in 1847, and set up for operation in the Salt Lake Valley. In the beginning of any new community, the people had to have lumber with which to construct their homes and flour with which

CHAPTER 32

Artisans and Tradesmen

Masons/Bricklayers

All of Lehi's earliest artisans by necessity worked at their trade only part time. There was not enough work for a man to engage in his craft without supplementary income. J. Wiley Norton, who arrived in Lehi in 1853, was the town's pioneer mason. He was also a policeman and later the city attorney. Many of the walls of early adobe homes were built by him. He and a Mr. Howe were the principal masons on the construction of the Lehi Meeting House in the late 1850s.

The mortar used in those structures was a clay and sand blend that would not weather well unless properly mixed. At least three of the unusual two-story homes he built in the 1860s are still standing in 1989. The house Norton built for his daughter Amanda and her husband J. Edgar Ross (338 North First East) is now the Ray Hardman home. John Beck's home (791 North First East), which Norton built in 1863, is now Lloyd Strasburg's home. And the John Zimmerman house (86 South Center), built in 1866, is presently owned by Ray Southwick.

Other early masons in town were Frenchman Abraham Enough, who also organized the Lehi Fife and Drum Corps in 1860; Norwegian John Andreason who came in 1863; and Englishman Henry Goodey, who arrived the following year. Carl Carlson emigrated from Sweden in the early 1870s to round out the town's international corps of artisans.

Carlson, Norton, and Andreason, in addition to constructing many Lehi homes, in 1878 and 1882 also built the three People's Co-op stone buildings still standing at 189-193 East State Street. In 1883 they erected the New West School at 55 West Main and in 1887 rocked up the Lehi Opera House, then the largest building in town.

In 1875 Dane Peter Johnson erected the first brick home in Lehi for fellow Scandanavian Peter Christof-

feron. This building at 99 West Main in 1882 became the quarters of the New West School. Another mason of this era was Joseph Kirkham, who in 1876 was called to work on the St. George temple.

Olaf Holmstead, who grew up at Pelican Point, left home when he was eighteen (1888) to apprentice as a brickmason in Salt Lake City. He followed this trade in the summer and returned to Pelican Point in the winter to help his father in the family fishing business (see chapter 29). Olaf achieved national attention when he was featured in a 14 May 1940 John Hix syndicated column, "Strange As It Seems." The article noted that forty years after Holmstead's masonry work on the Lehi Sugar Factory, he handled the salvaged brick again when it was used to build the Joseph Smith Memorial Building at Brigham Young University.

For more than fifty years Holmstead plied his skills in and about Lehi, working until 10:00 a.m. the morning of his 2 December 1944 death. Among his best known Lehi jobs is the Cutler Mansion (1900), which he and Charles A. Ohran bricked up. But there was scarcely a commercial building in town that he and his long-time friend and partner, Andrew Fjeld, did not either lay brick for or repair.

Andrew Fjeld apprenticed as a bricklayer in the 1880s under Carlson, Norton, and Andreason. In 1891 he formed a partnership with Charles Ohran, who had come to Lehi to lay brick on the Lehi Commercial & Savings Bank (206 East State). The two men, along with Olaf Holmstead, worked together for twenty years constructing many homes and commercial buildings, including the Lehi Slaughtering Company butchershop (1893—still standing at 101 West Main); the Northwest Branch/Third Ward Chapel (1894—still standing at the northeast corner of Fifth West/Twelfth North); Lehi Fire Station (1901—166 West Main), the Joseph E. Dorton butchershop (1901—still standing at 46 West

Main), and the Lehi Drug Store (1919—still standing at 162 West Main). After Ohran moved to California Fjeld entered into partnership with Henry Erickson, Ohran's nephew, and from 1938 to 1944 worked entirely with Olaf Holmstead.

Johnny Donnalson, who came to town in 1890 to work on the Lehi Sugar Factory, was a master stonemason. He laid many blue-rock limestone foundations in town (the rock usually quarried by Jonas Holdsworth), and was foreman of the foundation work on the Lehi Tabernacle. A still standing example of his work is the 1891-built Jonas Holdsworth building (169 West Main) which houses Cobblerock Cloggers in 1989.

Chase Featherstone, who carried hod for his bricklayer father, apprenticed in Salt Lake City and moved to Lehi in 1894. He bricked scores of Lehi buildings; his largest projects were the Smuin Dancing Academy (1913) and the Lehi High School Auditorium (1930). He and Olaf Homestead in 1914 contracted with Lehi City to lay the earliest sidewalks in the central part of town.

Elias Jones came to Lehi for the construction of the sugar factory. For the next forty-eight years he was in charge of all repairs to the brickwork of buildings, furnaces, and lime kilns. He also was the foreman of the bricklaying on the Lehi Tabernacle (1900-1901), taught two of his sons, Clark and Morris Jones, the masonry business, and did the fancy brickwork on his home at 288 West Main (Phoebe Innes's house in 1989).

Other known Lehi brick and stonemasons since Jones are George Holmstead (Olaf's brother), A. C. Schow (cement pipe), Earl, Reed, Virgil, and David Roberts, Alan E. Fjeld, Newell B. Turner, Glen and Albert Brooks, John E. Jolley, Garold Jolley, Bill Jolley, Marlin Christiansen, Don Peterson, Kirk Evans, and Richard Russell.

Carpenters

Thomas Ashton, Lehi's first carpenter, arrived in town in 1851. The Englishman had apprenticed for six years as a wheelwright, carriage builder, and ship carpenter. He thereafter worked on the Liverpool and London Railway. After converting to Mormonism he moved to Illinois, worked on the Nauvoo Temple, assisted in building the famed Mormon steamship *The Maid of Iowa* and built many wagons which brought pioneers to Utah.

Ashton's skills and tools were in great demand by early Lehi settlers. In addition to building the first Lehi-Jordan River Bridge in 1853, Ashton was also master carpenter on the Meeting House, and the Southwest (Thurman) School. In 1877 he designed and built the Lehi City Hall on Main Street. His son, Joseph H. Ashton, followed in his carpenter father's footsteps.

John Jackson, Jr., and his family arrived in Salt Lake City on 30 August 1868. Bishop David Evans was present when the wagon train arrived in the valley and made immediate enquiry concerning tradesmen.

When he found out that Jackson was a carpenter he asked presiding Bishop Edward Hunter if he might take him to Lehi. "Yes, yes, take him along, load stock, and barrel," was the reply that brought Jackson to our town.

Like other tradesmen of the day, Jackson also worked outside his craft to survive. Unfortunately this led to his death. On 5 January 1870 while freighting a load of cedar posts to Salt Lake City, he was thrown from the wagon, caught his head in a wheel, and died from a broken neck.

Pioneer carpenters who fared better than Jackson included Jens Anderson, J. W. Molen, Hyland D. Wilcox, John Stewart, and Alphonzo D. Wilcox, who in partnership with his father Hyland was a carpenter on the Primary and Grammar School buildings, which were built in 1905 and 1910.

George Kirkham, skilled as an artist and musician in addition to his carpentry, painted the scenery in the Lehi Music Hall which provided the backdrop to many theatrical and dramatic performances. In 1876 he left his art work and house painting and moved with his brother Joseph to Dixie to work on the St. George Temple. After he returned his work was primarily carpentry, specializing in scroll work and fancy cornices. During 1892-93 he labored as a finish carpenter in the Salt Lake Temple. A unique table he built using a scrap of each type of wood used in the temple, was until recently on display in Lagoon's Pioneer Village.

German emigrant Peter Loutensock came to Lehi in the early 1880s on the invitation of fellow countryman John Beck. He was hired by the People's Co-op as a furniture maker. The department specialized in making lounges, cupboards, and bureaus. When John Beck began to develop Saratoga Resort in 1884, he hired Loutensock as his master carpenter. In 1888 the craftsman constructed an elaborate decorative front on the Lehi Opera House (see chapter 42). He later moved to Eureka, where he was foreman carpenter for Beck's extensive mining properties.

Loutensock's Lehi partner for a time was Henry Lewis. Lewis, who later became the local mortician and a prominent real estate broker, started in the building industry with the People's Co-op making caskets and other items of furniture.

Several Lehi carpenters apprenticed with Loutensock & Co., but only John S. Willes, Hyrum Webb, and Franz Salzner (construction foreman on Idaho Falls Temple) became full-fledged builders. Their contemporaries also included John Stewart's sons Harry and John Stewart, Jr. Willes, a Lehi mayor, was best known for building the old Sego Lily School and for the fancy interior woodwork in the Lehi Tabernacle.

Other local carpenters of the late 1880s and early 1890s were Mons Heber Anderson, George Goates, Monroe Wilson (outside carpenter on Tabernacle), and James B. Gaddie. Wilson & Gaddie Co. in 1901 pur-

chased the old John J. Thomas place (the original Lehi Tithing Lot) and erected a carpentry shop and lumberyard. The 28 March 1901 *Lehi Banner* noted that they had their sawmill in "full blast." In 1905 Gaddie sold his interest to Wilson, who in turn took S. J. Taylor into partnership.¹

Several members of the local Whipple family have been builders. The Lehi Ward Records of 26 June 1884 record that one-inch moulding was "first made in Lehi by Gaddie, Whipple and Co." using the first stationary steam engine in town. Edison and Gay Whipple, who arrived in Lehi on a wooden "bonecrusher" bicycle with an iron tire he had made himself, were the first Whipples to wield a hammer and saw in Lehi. Gay was a true artisan. In addition to building, he also crafted fiddles and guitars and was the designer and co-builder (along with George Goates) of the Lehi Silver Bandwagon (see chapter 46). His son John was also a carpenter as well as a sign painter.

Several carpenters arrived in Lehi to work on the Lehi Sugar Factory in the early 1890s and stayed. These men were Edward Steele, Joseph Winn, the Wilson brothers (Monroe, William and Al), and R. John Whipple. Whipple established Whipple Lumber Company in 1916 and was its proprietor until selling out to his son, Byron, in 1940. The younger Whipple was also a builder and owner of the Lehi Lumber Company (now Peck's Building Supply).

Other carpenters of the post-World War I years were Joseph Holden, Andrian Mayberry, Benjamin Stewart, W. W. Dickerson, Robert T. Gilchrist, Adam Mayberry, John Mayberry, John H. Webb, and Lyman B. Willes. Since World War II local carpenters and builders have included Jay K. Haws, Chester Peterson, Alma Peterson, George Ingram, Arlin D. Fowler, Raymond Stewart, Don Peterson, Melvin Anderson, Orlin Wathen, Jerry Beck, Lonne Peterson, Doug Peterson, and Randy Serma. Prominent local home builders as Lehi enters the 1990s include A. Kent Peterson and Kenneth Peck.

Current construction companies listed in the 1988-89 Lehi telephone directory include Barco Construction (7655 North 8000 West), Todd Greene Roofing (9329 North 9550 West), N. P. Jones Construction Inc. (10900 North 8800 West), K. K. Construction (110 North Center), MDK Construction (1995 North 900 West), E. B. Scott Construction Co. (9600 North 9300 West), Scott Palmer Construction (545 South Fifth West), and Snyder Concrete (7752 North 9150 West).

Plasterers

William Clark, Lehi's first known plasterer, did the interior work on the Meeting House when it was built in the 1850s. But his ranching activities became so successful he soon turned the artisan work over to his school teacher step-son J. Edgar Ross, who plastered many Lehi homes.

Joseph Trinnaman was the craftsman who replastered the Meeting House after it was severely damaged by fire in 1870. When he put down his trowel he was also a much-loved entertainer. People enjoyed his clever singing, stepdancing, and acting abilities.

Brothers John and Fred Merrill arrived in Lehi from England in 1875. John was a carpenter and Fred a plasterer. Fred stuccoed many Lehi homes and public buildings before moving to California in 1920. Marion A. Brown apprenticed with Fred Merrill (his brother-in-law). Lester Zimmerman, who did the fancy French-stuccoing work inside the Lehi Second and Fifth Ward (Lehi Civic Center) buildings, also apprenticed under Merrill. Other known plasterers of modern vintage have been William Turner, Leon Peet, Earl J. Roberts, Nile Roberts, and Don Ainge.

Painters

Enos Jackson, who immigrated to Lehi in 1868, was the town's first house painter; he also worked in the interior of the Salt Lake Temple in the early 1890s. His son John F. also learned the painting and wallpaper hanging business. John F.'s son Earl, a third-generation painter, was killed in 1940 when he fell from a ladder while painting a house.

John Jackson (a brother of Enos), and John R. "Painter" Peterson formed a long-lasting house painting partnership in the 1890s. Other Lehi painters listed in various *Utah Gazeeters* between 1879 and 1922 include J. P. Dyring (1903), Edward Mowry (1903), John Cooper (1908), Charles Jackson (1917), Ernest Jackson (1917), and Harvey Lewis (1922). Horace Hadfield, Tony Ferkovich, Mont A. Pulham, and Marvin and Arland Pulham & Sons are painters that have lived and worked in Lehi in more recent times.

Coopers

While there have been several Lehi families with the name Cooper, there are only three known coopers—barrel makers Charles Barnes, Peter Turngreen, and Joseph H. Woolston. All worked at their trade in the 1870s and 1880s.

Plumbers

The earliest Lehi plumber of record was George Lott who advertised his business in the 19 March 1909 *Lehi Banner*. World War I-era plumbers include Helie B. Angell, Isaac Anderson, Joseph Roberts, and Morgan Lott. Lott, because of his extensive advertising, is perhaps the best known plumber in Lehi's history. He got his start while working from 1900 to 1907 as a mechanic and engineer at the Lehi Sugar Factory. From April 1914 until December 1915 he maintained his plumbing and electrical business at 120 West Main. The 6 November 1915 *American Fork Citizen* announced that he was going to erect new quarters just east of the recently completed Racker Building, but instead he moved into

the middle suite of that facility (32 West Main—Alpine Printing in 1989). In May 1921 he expanded a door east (24 West Main—Porter's Place in 1989).

By 1923 the energetic tradesman had become M. S. Lott Plumbing & Heating, though he continued to perform electrical work and sell appliances. The 25 January 1923 *Lehi Sun* reported that he had been given special notice in the January issue of *The Plumbers Trade Journal* (published in New York) for his recent work in installing a steam heating plant in the Lehi Roller Mills.

A familiar figure about town on his yellow motorcycle, Lott received most of the local plumbing contracts, including the Smuin Dancing Academy and the Lehi High School. But as the Depression grabbed the economy by the throat his business plummeted. In the 25 January 1934 *Lehi Sun* he explained that in recent years he had contracted for as much as \$134,000 worth of business. But in 1933, when only fourteen plumbing jobs were to be had, his gross income was only \$10,754.

In 1934 Lott moved his business uptown into the 1878-built People's Co-op (193 East State), where he remained until the spring of 1939. Though he continued to live in Lehi, his business interests were in Kearns for the next eight years. In February 1947 he purchased the former New West School building at 55 West Main and reestablished his Lehi plumbing firm. He constructed a new brick addition to the north which served as his showroom for two years. In 1949 the east half

was leased to the post office; the west part became [Ralph] Johnson's TV and Appliance store. Lott maintained his plumbing business from the New West School part of the structure until his 1956 death.²

Other Lehi plumbers since World War II have been Earl Chilton, Kenneth Welcker, Clarence Ball, Arnold Ball, Leo Ball, Ron Curtis, and Gary Carlton.

Electricians

Although electricity came to Lehi in 1899 (see chapter 2), no local electrician worked in the city until Fred Shelton, who was first listed in the 1916 *Utah Gazeeter*. Lehi electricians since then have included Clell Jackson, who started out working in the Lehi City Light Plant, then managed the system for seven years. During World War II he was an electrician at Camp Williams, then opened his own electrical contracting business. Other electricians have included Eldred Southwick, Earl Southwick, VaNile (Mike) Southwick, Mike Southwick, Randy Julian, and Shane Julian.

Cabinet Makers

While all cabinet makers are carpenters, not all carpenters are cabinet makers. Cabinet making requires the utmost of artistic ability. Lehi artisans in this field have included Wane Christensen, Merrill Busk, Darrel Curtis, Evan Colledge, Jr., Scott Colledge, Kim and Kevin Beck, Morton Turner, Lee Stewart, Guy Chamberlain, and Burt Gray.